

Appl. No. 10/663,780
Amendment dated: November 8, 2004
Reply to OA of: July 7, 2004

REMARKS

Applicant has amended the specification and claims to more particularly define the invention taking into consideration the outstanding Official Action.

The specification has been amended at pages 14 and 15 to correct the informalities cited therein. Accordingly, it is most respectfully requested that this objection be withdrawn in view of the amendment thereto.

Claim 1 has been amended to further define the specific aspect of the invention of insulating light-absorbing pigments or dyes as fully supported by Applicant's specification. It is clear from the discussion of the background of the invention, at the top of page 3 of Applicant's specification, that the photoresist is considered an insulation layer and this has been made explicit in the claims.

The rejection of claims 8 and 9 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been carefully considered but is most respectfully traversed.

Claims 8 and 9 have been amended as suggested by the Examiner in the Official Action to correct the dependency of claim 8 from claim 1 to claim 7 and the dependency of claim 9 from claim 1 to claim 8. Accordingly, it is most respectfully requested that this rejection be withdrawn.

Claims 22 to 25 have been added to the application to further specific aspects of the invention as fully supported by Applicant's specification; see for example page 12. Applicant most respectfully submits that all the claims now present in the application are in full compliance with 35 U.S.C. §112 and are clearly patentable over the references of record.

The rejection of claims 1-12 under 35 U.S.C. 103 as unpatentable over U.S. 6,037,712 in view of JP 11-273870 has been carefully considered but is most respectfully traversed.

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Applicant wishes to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicant also most respectfully directs the Examiner's attention to MPEP § 2144.08 (page 2100-114) wherein it is stated that Office personnel should consider all rebuttal argument and evidence present by applicant and the citation of *In re Soni* for error in not considering evidence presented in the specification.

Claims 1-12 are rejected under 35 U.S.C.103(a) as being unpatentable over US 6,037,712 (US'712) [cited in the information disclosure statement filed 9/17/03] in view of JP11-273870 (JP'870).

Applicant believes that the process of the present application is different from that of the prior art. Applicant believes that the additives (dye or pigment) added in the non-photosensitive polyimide of the present invention is different from that (carbon black) described in the prior art (UP11-273870). The additives (carbon black) described in the prior art will deteriorate the insulation of the pixel defining layer and perhaps cause

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disadvantage of current leakage or electrical short. In contrast, the additives (dye or pigment) added in the non-photosensitive polyimide of the present invention will meet the requirement of the insulation for the pixel-defining layer.

As mentioned in the objects, the present invention is to provide a method for fabricating an anti-glare pixel-defining layer on an OLED panel to clearly define the area of the pixels on said OLED panel and to separate cathodes from anodes for avoiding shorts. In particular, the OLED panel was operated in the condition of high electric currents and frequent switch driving modes. Therefore, the insulating property and electrical stability of the anti-glare pixel-defining layer is very important in the design of OLED panel.

Although JP'870 discloses a method for blacking an insulating layer by adding carbon black to polyimide resin. It is preferable that the quantity of carbon black added to the polyimide resin be 10~50 mol.% in JP'870. However, carbon black is typical conductive particles. The introduction of carbon black shall significantly break the insulating property of resin. Specially referring to US6,306,559 entitled "Organic electroluminescent device comprising a patterned photosensitive composition and a method for producing same", the resistivity of a photoresist layer reduced from 1×10^{12} (column 25, line 7) to 2.5×10^9 Ohm•cm (column 29, line 46) subsequent to the introduction of 10% carbon black.

In the high temperature of the subsequent curing process or the high electric currents and frequent switch operations of the OLED panel, thermal driving and electric driving diffusion of carbon black, silicon and ferrous oxide shall accelerate the deterioration of electrical insulation stability of insulating layer leading to the failure of OEL device. In particular, the ferrous oxide is possible result in the ion diffusion and suppression of exciton quenching to the degradation mechanism of OLED panel with reference to H. Jiang et al. JP'870 completely ignored the insulating property and electrical stability to the anti-glare pixel-defining layer.

The problem solved by the invention was never before even recognized. The recognition of an unrecognized problem militates in favor of patentability. These factors

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are part of the teachings of the prior art as a whole and must be taken into consideration. Meanwhile, the deterioration of electrical insulation stability in JP'870 is contrary to the teachings of applicant's emphasis on the insulation stability of anti-glare pixel-defining layer. In addition, "Light-absorbing pigments or dyes" in claim 1 have been amended as insulating light-absorbing pigments or dyes to more explicitly describe the claimed invention. In view of the above remarks, it is believed that the claims 1~12 clearly distinguish over the prior art relied on by the Examiner either alone, or in combination and are in proper condition for allowance. In view of this, reconsideration of this application and allowance of all the claims are respectfully requested. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call.

Applicant submits herewith a further reference in connection with this application which is listed on the enclosed Form 1449 and the required late filing fee. The Examiner is requested to acknowledge consideration of the information provided in this paper in the next Official Action. the

In view of the above comments and further amendments to the specification and claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

BACON & THOMAS, PLLC

By: 
Richard E. Fichter
Registration No. 26,382

625 Slaters Lane, 4th Fl.
Alexandria, Virginia 22314
Phone: (703) 683-0500
Facsimile: (703) 683-1080
REF:kdd
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